GEOGRAPHIC SCHOOL BULLETINS

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Contents for Week of February 9, 1942. Vol. XX. No. 29.

1. Steel Singapore and Its Green Island
2. Curious Curaçao, Arid Aruba Get U. S. Protection
3. Hitler in Napoleon's Footprints on the Moscow Front
4. Free French Forces Around the World
5. Geo-Graphic Brevities

A. B. Wilse

NORWAY'S LITTLE LOFOTENS MAKE BIG BUSINESS OF BIG FISH

From January to April, fishermen from neighboring islands and the mainland of Norway gather at the Lofoten Islands by tens of thousands for the annual fishing season. In the spring, their small craft all but blanket the sea. Later, in the drying season, the quantities of white cod spread out on the rocks suggest some giant community wash day. Just north of the Arctic Circle off Norway's coast, the Lofotens and their fishing industries, now German-held, have been the scene of recent surprise raids from Britain (Bulletin No. 5).

HOW TEACHERS MAY OBTAIN THE BULLETINS

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UMI

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General Headquarters, Washington, D. C.

Steel Singapore and Its Green Island

SINGAPORE in the recent headlines presented the picture of a steel-studded tropical fortress, an embattled base for British forces in the Far East.

News photographs and reports are reminders that it is a growing city of some 650,000 inhabitants, the large majority of whom are Chinese (illustration, next page). But behind the news lies a green tropical island, less than 100 miles north of the Equator, with plantations and farms as well as modern armaments.

World's Largest Naval Base on Island's North Shore

Singapore Island, 217 square miles in area, is roughly diamond-shaped, with numerous florid curlicues where bays and inlets sculpture its shoreline. The city spreads along the southeast shores around the famous 36 square miles of harbor. To the northwest is the race track, to the southwest the golf links. At the east end of the harbor spreads the spacious airport, on more than 300 acres of "made" land, formerly swamps; planes can reach San Francisco in 6 days, London in 5½.

The northeast and northwest shores of the island, washed by the narrow Strait of Johore, dovetail with the southern tip of the Malay Peninsula, into which Singapore Island fits like the fingernail on Malaya's long finger. Britain's air base stands in the jungle along the northeast shore, and at the northern edge of the island the naval base, called the world's largest, can hold the entire British fleet.

West of the naval base, a causeway spans the Strait of Johore, linking Singapore to the mainland and carrying the railroad that extends through the entire peninsula to Thailand. Near-by conduits bring water to Singapore from Johore.

Sacking of City Made Earth Red, Malays Say

To the outside world, the port is the vital area of the island. Among the manifold activities of international importance taking place there is the work of the League of Nations' health service, which patrols the Far East to prevent epidemics of cholera, typhus, smallpox, bubonic plague, and other diseases. Through the port go the Malay States' exports of rubber and tin—about a third of the world's output—and such substantial shipments from other neighboring countries are transshipped there that Singapore actually handles in normal times about four-fifths of the earth's rubber. Its tin smelter is one of the world's largest.

The greater part of the island's area, however, is usually peaceful farm land or rubber plantations. Chinese inhabitants have flourishing truck farms producing lichee nuts, rice, pineapples, tapioca, vegetables, and coffee, with bananas and coconuts as well. Tree ferns and traveler's palms luxuriate.

The rubber plantations are mediocre. Chinese lay the blame for any unproductive spot on Malay superstitions about the red soil: it was drenched with blood, they say, and thereafter accursed, at the sack of old Singapore in the 13th century. Then Javanese slaughtered the inhabitants of that forgotten Malay settlement.

Today the Raffles Hotel, Raffles Square, and the bronze statue therein—indeed, all Singapore is a monument to a 19th century sales-manager-supreme for British trade, Sir Stamford Raffles. He accomplished the founding of Singapore as a modern free port. When a treaty in 1814 had given the Netherlands a monopoly over all ports of the rich Indies trade, Raffles induced a usurping sultan to sell the Singapore harbor for British use, rewarding him with $1,000 and some rolls of yellow and black cloth. On February 6, 1819, Singapore's birthday, a

UMI

Harold Lamb

BIBLICAL HAMA, WITH ITS MEDIEVAL WATER WHEELS, IS FREE FRENCH NOW

The Oronte River flows through dry inland Syria, where its waters are valued for irrigation. The city of Hama has been famous through the centuries for its giant water wheels, which lift the river water to higher levels. Some 600 years ago 30 of them were in operation, each one considered a major engineering feat at that time. Now less than a dozen are still in existence. A Hittite city of prehistoric origin, mentioned in the Bible, Hama was first placed under European government when the Crusaders captured it in 1108. Now Syria and the other Levant States align themselves with the Free French in the present war (Bulletin No. 4).

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Curious Curaçao, Arid Aruba Get U. S. Protection

TRADITIONAL Dutch towns in a flamboyant tropical setting of the Caribbean; arid land that draws water from ships' holds instead of wells; a giant oil industry in a country that produces no oil—these are some of the incongruities of the West Indies islands of Curaçao and Aruba, where it has been announced a protective United States air force is to be stationed.

The islands are situated off the northwest coast of Venezuela.

Curaçao and Aruba are the two largest and the most important of the six islands which make up the Netherlands possessions in the West Indies. With their barren neighbor, Bonaire (now reported an internment center for German residents of the islands), they comprise the southern members of the two widely separated island clusters ruled as a unit under the group name of Curaçao. The other three islands—Saba, St. Eustatius, and the Netherlands share of St. Martin—lie east of Puerto Rico, some 500 miles away.

Among Largest Oil Refineries in the World

Although often called a colony, these islands normally form a constituent part of the Kingdom of the Netherlands. They are administered by a local governor and partially elected council, with headquarters at Willemstad, on Curaçao.

After the German attack on the Netherlands in May, 1940, Curaçao's governor declared war on the Reich. Shortly thereafter, British and French troops were reported to have been landed in the islands in order to forestall any German attempts to sabotage the vast oil industry, although the French forces later withdrew.

Curaçao (210 square miles) and Aruba (69 square miles) produce no crude oil themselves. Yet they pour forth a steady stream of fuel, lubricating, Diesel, and other oils, and of the high octane and regular gasolines that feed the machines of war or peace. The answer to the apparent paradox is found in the islands' three refineries, built to take advantage of the proximity of Venezuela's rich sources of oil in the Maracaibo region, about 170 miles southwest of Aruba. Two of these refineries are in the world's front rank. Aruba's giant establishment, operated by a subsidiary of Standard Oil, claims a record capacity of 285,000 barrels of oil a day. That of the Royal Dutch Shell Company, on Curaçao, runs it a close second.

Oil Brought from Venezuela

An "endless chain" of tankers normally carries some three-fourths of Venezuela's crude oil supply to Aruba and Curaçao. Additional oil comes from Colombia and the British island of Trinidad. Outgoing petroleum products account for 95 per cent or more of the islands' export trade, and are reported to be providing a large share of Britain's fuel and lubrication for war machines.

The spectacular growth of the Curaçao oil industry, within the last two decades, has brought many changes to the islands. Arid Aruba made a meager living in pre-petroleum days by fishing, weaving "Panama" hats, and producing a few export articles for the drug and tanning trades. But the advent of oil helped increase the population from less than 10,000 inhabitants in 1918 to more than 30,000 in 1939. More important Curaçao—with an already thriving commerce based on phosphate and other exports and the activities of its free port, Willemstad—grew during the same period from some 34,000 people to more than 65,000.

Although Curaçao is slightly more fertile than Aruba, both islands suffer from

UMI

free trade treaty was signed. In four months 5,000 people flocked to the port.

Soon the name of Singapore echoed among seamen with a sinister ring. The sultan who sponsored it was not above the suspicion of poisoning his father. The first British governor was stabbed by an Arab. Pirates swaggered into port to buy weapons, then anchored in ambush outside the harbor. The name acquired associations as fierce as its meaning in the tongue of India from which it came—Singhapura, City of the Lion. Yet Raffles, who kindled the sinister excitement, escaped all its dangers and died young after falling downstairs.

The population rush to Singapore after its opening as a free port, repeated on a small scale a century later in a "rubber rush," is indicated by the racial hodgepodge found in the city today. Sprinkled through the English city, with dignified stone buildings lining macadamized avenues, are short streets straight from China. Chinese signs line open fronts of first floor shops; from second, third, and fourth floor windows above them, items of the family laundry on projecting poles fly like banners. Long red candles for Chinese joss houses are made in workshops in the shadow of Moslem mosques. Malay huts on stilts over the water fringe the city.

Note: For further information about Singapore, see the following articles in the *National Geographic Magazine*: "Life Grows Grim in Singapore," November, 1941; "Behind the News in Singapore," July, 1940; and "Singapore, Far East Gibraltar in the Malay Jungle," May, 1938.

Singapore can be located on the National Geographic Society's new Map of the Theater of War in the Pacific Ocean. A price list of maps may be obtained from the headquarters of the Society in Washington, D. C.

Bulletin No. 1, February 9, 1942.

Screen Traveler, from Gendreau

CHINESE DRAGONS HELP THE BRITISH LION GUARD SINGAPORE

Chinese temples and British office buildings stand side by side in the city, for this British possession has an international population of which the Chinese comprise between 75 and 80 per cent. Many of these Chinese subjects of the British Empire speak no language except English. Others, however, both speak and read Chinese, as the signs on the temple attest.

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Hitler in Napoleon's Footprints on the Moscow Front

RETREAT from Moscow has become a synonym for military disaster in the century and a quarter since Napoleon gave the phrase its ominous meaning. When German invaders fell back under Russian counterattacks last December in the Moscow sector, modern historians began to measure Hitler's Russian campaign against Napoleon's.

Hitler's march started earlier in the year, did not get so far, and receded more slowly.

The only basis on which Hitler and Napoleon could compare their Moscow treks is east-west progress to and from the city. While the little French Corporal moved his men in a fairly compact mass against Moscow itself, the German forces of 1941-42 have been operating as a broad band hundreds of miles in width, stretching irregularly across Russia from the Arctic to the Black Sea. As the front line of the band bulges toward Moscow or recedes from it, it is moving at a different tempo and sometimes in a different direction elsewhere. Napoleon's moves were recorded in miles; Hitler's must be tallied in square miles.

Napoleon Also Had Non-Aggression Pact

Hitler, declaring war on Russia on June 21, was only one day ahead of the anniversary of Napoleon's declaration, June 22, 1812. For his campaign—mainly pedestrian—Bonaparte found that date too late in the season for full conquest of Moscow's vast domain before the severe Russian winter snowed under his victory hopes.

Like Hitler, Napoleon had concluded a friendship pact with Russia before the invasion (the Peace of Tilsit, in 1807). Napoleon's lasted for nearly five years, Hitler's less than two.

Like Hitler, Napoleon had previously overrun most of Europe except England before turning east to Russia.

Starting out from German territory, two days after the declaration of war, Napoleon led more than 400,000 men across the Russian frontier, along Lithuania's Nemunas River. After he passed the first Cossack guard at the border, the Russians offered no opposition to the first three hundred miles of his advance. But the timetable of Napoleon's progress was geared to ambling cavalry and infantry, with lumbering supply wagons holding them back, since neither railways, paved roads, motor vehicles, nor airplanes were then in existence.

Entered Kremlin September 15

Napoleon's first real battle on the road to Moscow was fought for Smolensk, 262 miles west, where he engaged the Russians on August 6, 1812. In besieging the city, which was held by the rear guard of retreating Russian forces, Napoleon lost several thousand men. Smolensk was essential both to Napoleon and to Hitler because the main roads to Moscow pass there. The modern German invaders also made their way into the same key city in August, although they claimed an earlier entry. Smolensk marks a singular similarity in Napoleon's timetable and Hitler's up to that point.

From Smolensk eastward, however, the two invaders traveled on a different schedule. It took Napoleon only thirteen weeks to reach Moscow and capture the queen city of the country he was not destined to conquer. On September 15 he

UMI

water shortage. Much of the water supply comes from the United States in ships' holds. Since the stoppage of food and other necessary imports formerly received from Europe, the islands now are reported making the United States their chief source of supplies. In peace time, Curaçao was visited annually by as many as 7,000 ships. Because of the duty-free bargains in goods from all over the world, Willemstad was known as a "shoppers' paradise."

The modern arrival of United States workers and technicians, and the setting up of "company towns" with homes, golf courses, clubs, schools, and commissaries, have added a strong "Yankee" flavor to the islands' international potpourri.

Situated between outlying islands of the Caribbean and the Isthmus of Panama, the island of Curaçao early played an important rôle in the history of the West Indies and the Spanish Main. It was the haunt of pirates and one of the largest slave markets in the Western Hemisphere. Discovered by Spaniards in 1499, Curaçao was seized by Dutch naval forces in 1634, to become a bone of contention in the three-cornered struggle for power between British, Dutch, and French. Willemstad's harbor made the island an especially valuable possession as a naval base. Both islands were awarded to the Netherlands by the Treaty of Paris in 1815.

Today, Dutch is the official language; Netherlands influence is paramount in neat and substantial Dutch architecture and traditional ways of life. But the native speech of the islanders gives evidence of their international heritage. Known as Papiamento, this tongue is a combination of Dutch, English, French, Indian, Spanish, and Portuguese which has been called a "perfect pepperpot of a dialect."

Note: Curaçao and Aruba are shown on the National Geographic Society's Map of Mexico, Central America, and the West Indies, which may be obtained from the Society's headquarters in Washington, D. C.

Bulletin No. 2, February 9, 1942.

Ned C. Bell

PERPETUAL TRADE WINDS KEEP ARUBA'S TREES BENT AND ROCKS BARE

Scientists attribute the barrenness of Aruba's coral rock surface to the fact that constant trade winds blow the soil out to sea. In only a few places does vegetation find enough soil to take root—with the exception of the hardy cactus (right and center). Lopsided, windblown trees grow branches only on the leeward side, and the wind promptly bends the branches to a horizontal position. Most of the year, these trade winds blow ceaselessly from the northeast. On the flat little island, the 600-foot conical hill in the background merits the name of "Mount" Hooiberg; it is an outstanding landmark visible for miles across Aruba and even out to sea.

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Free French Forces Around the World

ANNOUNCEMENT of United States lend-lease aid for the Free French movement raises the question of who and where its followers are, and what their own potential resources are for carrying on war against Germany.

The Free French forces can be found scattered around the globe—from the heart of Africa to the Far East, from the South Pacific to the Bible Lands.

On the other hand, the French possessions in the Western Hemisphere officially still are loyal to the Vichy Government, except the question-mark colony of St. Pierre and Miquelon.

Western Hemisphere Contains Exceptions to Free French Rule

In the shadow of belligerent Canada, the small islands of St. Pierre and Miquelon were until Christmas, 1941, ruled by a governor, who, as an officer of the French Government, was technically the representative of the present Vichy regime. Removing him at that time, Free French forces took over the islands by occupation and plebiscite, but their status has since been the subject of negotiations by the U. S. State Department.

Allegiance to Vichy is maintained also by the West Indies islands of Martinique and Guadeloupe, together with the sultry French Guiana—home of Devil's Island penal colony, and next door to Surinam (Dutch Guiana), where United States troops have been sent.

The headquarters of the Free French movement, officially called the "French National Committee," is in London. On other continents, the list of associated countries includes French Equatorial Africa and the Cameroons; the Levant States and French India in Asia; and the islands of the French Empire in the Pacific (illustration, next page).

Ten Million People and Lands Six Times as Large as France

Together, the Free French forces represent a population of roughly ten million people and a land area close to a million and a quarter square miles. This is an area nearly six times the size of France, although infinitely more limited in its productive power. In addition to manpower, natural resources of the participating countries include valuable minerals, farm produce, cattle, cotton, rubber, vegetable oils, and innumerable jungle products useful in manufacturing activities.

French Equatorial Africa, sometimes called the French Congo, yields wild rubber, palm oil, coffee, cacao, cotton, and ivory. Although its resources so far are little developed, even a limited output may be of considerable value in providing necessary equipment for native troops, as well as in the general war effort.

The colony occupies such a vast expanse of territory that it offers potential springboards for African action in various directions. It was from the Chad region, a division of French Equatorial Africa, that Free French forces made their surprise attack on the southern desert outposts of Italian Libia. Near the Atlantic coast, on the broad Congo River, the French Equatorial Africa capital of Brazzaville has been a practical working headquarters for the Free French men and supplies on the African continent. Just across the river, the Belgian Congo capital, Leopoldville, is the terminus of the new air line from Miami, Florida.

The neighboring French Cameroons provide Free French forces with an additional entry port at Douala, less than eight hours of bomber-flying time from the

UMI

moved into the abandoned Kremlin, and had the bitter satisfaction of seeing his captured prize aflame with fires set by Russian hands. At the peak of his achievement, Napoleon held a string of Russian cities under martial law, but faced the onset of winter without the assurance of adequate provisions.

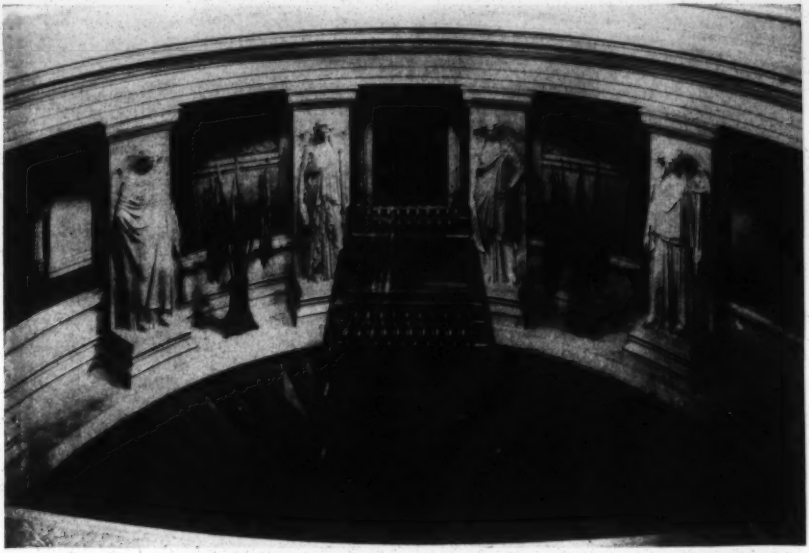
The Nazi invasion, on the other hand, at its high tide in November, 1941, had not reached Moscow, although Russian sources hint that it came within ten miles of the city. Germans so menaced the capital that some of the government functions were removed eastward to Kuibyshev on the Volga. But the invaders had overflowed a rich and productive area in western Russia that was estimated to be four times as large as England. They besieged Leningrad, the second largest city, and actually captured Kiev and Kharkov, respectively the third and fourth largest Russian centers.

In both invasions, although more than a century apart and quite different in geographic distribution, Russia's winter brought an ebb to the invaders' fortunes.

Although he won the battle for Moscow, Bonaparte lost the peace. The wily Russians prolonged peace negotiations until, six weeks after his entry into the Kremlin, the first frost caught him without provisions or peace terms deep in hostile territory. It took the French forces almost ten weeks to fight their way out.

Napoleon deserted them before all had staggered out of Russia, and hurried toward France in a carriage mounted on a sleigh. In all, it has been estimated that the Moscow venture cost him 300,000 men from an army of 400,000 to 420,000, and set him on the downhill path to Elba and exile.

Bulletin No. 3, February 9, 1942.



Dr. Hugh M. Smith

HERE HITLER'S FOOTSTEPS CROSSED NAPOLEON'S PATH

After the German occupation of Paris in June, 1940, the Nazi leader sponsored the transfer from Vienna to the French capital of the ashes of Napoleon's only son, the Duke of Reichstadt, or L'Aiglon ("the Eaglet"). Later Hitler visited the famous Bonaparte family tomb in the Dome des Invalides, where Napoleon and his brothers Joseph and Jerome (erstwhile kings of Spain and Westphalia, respectively) already were buried. Napoleon's sarcophagus (above) of polished red porphyry from Finland is of heroic proportions, fourteen feet high by thirteen feet long. Lighted through blue and amber windows, the massive tomb stands beneath a lofty dome and is surrounded by twelve colossal figures symbolizing the chief Napoleonic military victories which were all canceled by Waterloo and St. Helena. From the latter island, Napoleon's body was brought back to Paris in 1840, where his son's ashes also were brought a century later. Military strategists have pointed out that the destructive retreat from Moscow so damaged Napoleon's army that his downfall thereafter was inevitable.

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Geo-Graphic Brevities

NORWAY'S LOFOTEN ISLANDS PROVIDE FISH AND VITAMINS

THE Lofoten Islands off the northern coast of German-held Norway have felt repeated British hit-and-run raids. The islands lie in Arctic waters known as one of the world's most concentrated fishing grounds, where Norway has long found food for domestic use and for export. A catch of forty million cod in a single season has not been unusual (illustration, cover).

Together with coalfish, herring, and haddock, the cod provides raw material for industries which turn out salted, dried, and canned fish, cod-liver oil, fertilizer, concentrated vitamin products, and glycerine for explosives. In normal times the Lofotens ship tons of fish to Europe, Africa, and the Western Hemisphere.

Norway's largest islands, the Lofotens are just inside the Arctic Circle, 800 air miles east of Scotland. East of them on Norway's mainland is the iron-ore port of Narvik by which German invaders gained access to Sweden's iron.

Lifting sheer rock walls from the sea, tapering into jagged peaks, the islands have been compared to a row of giant shark's teeth. The Lofotens and the Vesterålen group have a 1,560-square-mile area and 40,000 inhabitants.

The coasts are never frozen because of the warm Gulf Stream. But the land is bleak and barren. Some barley is grown and a few cattle raised. At the southern end of the Lofotens, between Moskenesöy and Vaeröy, is the famous Maelstrom, which inspired Poe's horror story, "The Descent into the Maelstrom."

* * * * *

RATIONED ITALY HUNGERS FOR WHEAT

ITALY'S wheat shortage, as indicated by continual cuts in bread and macaroni rations, is caused partly by the cutting off of her prewar imports and partly by the average Italian's unusually large consumption of wheat foods. Normally Italy is one of Europe's principal wheat-growing nations, the third largest producer on the continent. The Italian crop is about one-third that of the U. S. Nevertheless, Italy must import as much as 35,000,000 bushels in a normal year.

In Italy, the average person until recently has been consuming seven and a half bushels each year, mostly in the form of bread and macaroni. The per capita consumption in the U. S., by contrast, is little more than four and a half bushels.

Italian imports of wheat, in prewar years, have been received for the most part from Argentina, Australia, the United States, and Russia.

The inadequacy of Italy's home-grown wheat supply is due in part to the hills and mountains. Only a fifth of the country is lowlands and plains, easy to cultivate (illustration, next page). The principal wheat-growing region is in the north, including the fertile valley of the Po, the country's greatest river.

* * * * *

VALUABLE DONETS BASIN KNOWN AS "SOVIET PENNSYLVANIA"

RUSSIAN counterattacks in the eastern Ukraine have recovered the Donets Basin from German invaders. Often called the "Soviet Pennsylvania," this region east of the Dnieper (Dnepr) near the Sea of Azov is one of Russia's key manufacturing areas. It has vast coal deposits close to supplies of iron and other metals needed for heavy industry. The Donets fields once furnished most of Russia's coal, but new mines have cut their proportion to about three-fifths.

UMI

Vichy-held base of Dakar, on the African "bulge" closest to South America.

In the ancient Biblical lands of southwest Asia, the French National Committee may draw on the resources of the Levant States (illustration, inside cover), as a result of that region's conquest by the combined British and Free French forces. These states produce such essentials as wheat, barley, and corn, plus grapes, olives, and citrus and other fruits. They grow quantities of cotton and raise livestock whose number almost equals that of the human population. The iron mines of Lebanon have been worked since ancient times.

Still farther to the east, in India, the Free French count among their adherents the five tiny coastal colonies of Pondichéry, Karikal, Chandernagor, Mahé, and Yanaon. They operate a number of small mills turning out textiles and jute.

More important in the war effort are New Caledonia and French Oceania. Besides their agricultural and cattle products, many of the islands have extremely valuable minerals. New Caledonia is especially rich in such minerals as nickel, chrome, iron, and manganese; antimony, mercury and copper also are found.

In Oceania, Tahiti—paradise of the Pacific—is reported to be speeding its war industries and conscripting natives for Free French service abroad. Its phosphorus and coconuts, outstanding items in Pacific island economy, form the basis for making certain war essentials. Phosphorus is one of the elements used in producing smoke screens. The dried meat of coconuts serves in making nitroglycerin and other explosives; the outer shell, charcoal for gas masks.

Note: For further information on Free French lands, see the following articles in the *National Geographic Magazine*: "Islands Adrift: St. Pierre and Miquelon," December, 1941; "Bombs Over Bible Lands," August, 1941; "Martinique, Caribbean Question Mark," January, 1941; and "Three-Wheeling Through Africa," January, 1934.

Bulletin No. 4, February 9, 1942.

Captain Harry Pidgeon

POIPOI IS FRENCH COOKING IN THE POLITICAL SENSE ONLY

The Marquesas Islands (Iles Marquises) belong to the peppering of French isles in the South Pacific, scattered along the Great Circle route between Australia and the Panama Canal. The staple food of Marquesans is *poipoi*, or fermented breadfruit from the trees that grow around their palm-thatched homes. Interested children watch while mother peels the breadfruit and father pounds the mushy pulp with a wooden tamper in a huge oblong wooden bowl. Made up in large batches, the *poipoi* is allowed to ferment, like dough, until its pungent odor and bitter taste are ripe enough for Marquesan palates. Then the whole family will eat it from a common bowl, scooping it out with two fingers.

Iron is mined not only in the Donets ridge, west of the river, but mines at Krivoi Rog west of the Dnieper tap one of the world's richest iron-ore deposits.

Industry has boomed the number of cities from 15 in 1933 to 52 in 1938. Stalino, Ordzhonikidze, and Konstantinovka are sites of steel mills. The new city of Gorvolka turns out mining machinery, Voroshilovgrad makes locomotives, and Kramatorsk has one of the world's largest plants for metallurgical equipment. The railroad network in the Donets area normally carries the heaviest freight traffic in the U.S.S.R. The region's port is Mariupol, on the Sea of Azov.

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HIGH MOUNTAINS ADVANCE AVIATION IN BOLIVIA

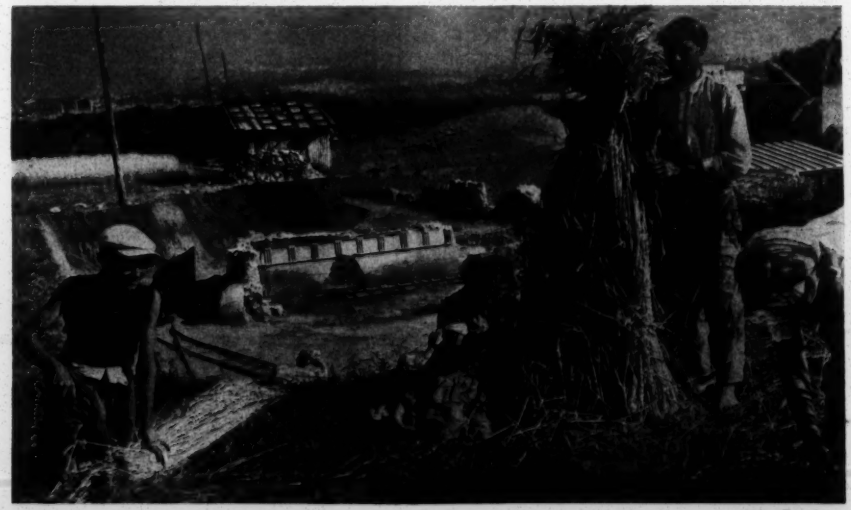
AVIATION instructors whom the United States Army has sent to Bolivia are finding that airplanes take an important part in developing that high, mountainous republic of South America.

Bolivia is ten times the size of Oklahoma. Its total population of slightly more than 3,000,000 is but 50 per cent larger than the Midwestern State's. It has only one-fifth the railway and highway mileage of Oklahoma. Most of the roads are impassable in the wet season. Transportation difficulties make imports, necessarily including much of the country's food, very expensive.

More than 20 years ago Bolivia organized an aviation school, with U. S. fliers as instructors. Every important city and town now can be reached by plane. Santa Cruz, for example, has no railroad or paved highway but is on air routes.

Lack of transportation has hitherto proved a handicap in developing natural resources. The country has vast timberlands, inaccessible by road. It exports quinine and hides, although more important now are its mineral products—copper, antimony, tin, lead, and silver. The United States counts on at least half of Bolivia's tin output. Also, Bolivia has agreed to turn over to the United States its entire tungsten output for the next three years.

Bulletin No. 5, February 9, 1942.



John Patric

GHOSTS CORNER THE CROP OF POMPEII'S HAUNTED WHEAT FIELDS

Among the relatively scarce wheat-growing areas of southern Italy were the fields rich with volcanic ash from Vesuvius that buried Pompeii in 79 A. D. Until the beginning of systematic excavation, farmers sowed and reaped their grain above the buried city without realizing why strange relics of the past occasionally appeared in the wheat fields. Now dead Pompeii is claiming the land again, as excavations yearly cut down the crop area and lay bare new parts of the resurrected city, such as the section of wall shown above (middle ground, center). Pompeii, 2,000 years ago a city of 20,000, is now three-fifths uncovered. Because of the scarcity of wheat, barefooted farmers cultivate the fields to the edge of the excavations.